**Steven E. Jasinski**

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and

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**Education**

Ph.D. (Earth Sciences, w/ concentration in paleontology), University of Pennsylvania (expected 2017)

Graduate Advisor: Dr. Peter Dodson, University of Pennsylvania

M.S. (Biology, w/ concentration in paleontology), East Tennessee State University (2013)

Graduate Advisor: Dr. Jim I. Mead, East Tennessee State University

Other Committee Members: Dr. Blaine W. Schubert, East Tennessee State University

Dr. Steven A. Wallace, East Tennessee State University

B.S. (Geobiology), Department of Geosciences, Pennsylvania State University (2008)

Academic Advisor: Dr. Peter D. Wilf, Pennsylvania State University

Thesis Advisor: Dr. Russell W. Graham, Pennsylvania State University

**Research Interests**

My research interests focus on the anatomy, phylogeny, and life history of extinct and extant animals. Understanding the anatomy, morphology and phylogenetic relationships allow for a more thorough understanding of the animals themselves. Additionally, this allows for more information to be gathered on the life history of these animals. Understanding these things in extant animals allows one to infer and gain a better understanding in extinct and fossil animals. Additionally, to better understand paleobiology and how animals live today and in the past I analyze the biomechanics of extant and extinct animals. I seek to bring life to fossils, and not only does this include describing and analyzing individual extinct animals, but also investigating faunas and ancient ecosystems as well. In particular, understanding ancient ecosystems and how they change through time can allow us to infer potential implications for changes occurring today. Macroevolutionary trends through time are also used to understand change and make inferences for things happening today and potentially in the future.

Thus far my research has focused on several animal groups. Much of this work has focused on turtles and Testudines evolution. Rather than focusing on how the group first evolved, I have sought to better understand how the group has evolved since then. I have been, and am still investigating, how turtles dealt with the end-Cretaceous extinction that killed off all non-avian dinosaurs and numerous other groups, with special emphasis on turtles from the southern United States and Mexico. I have also been investigating and anatomy and systematics of the Emydidae, the group of turtles leading to the box turtles and slider turtles people know today, and which are often kept as pets. Understanding intra- and interspecific variation is vital to understanding the systematics of these turtles.

I have also been studying various aspects on theropod dinosaurs. Some of this work has dealt with the anatomy, morphology, and phylogenetic relationships of theropods, in particular derived coelurosaurs such as dromaeosaurids and troodontids. While these small predatory dinosaurs led to birds and one of the instances of vertebrate flight, they were a diverse group and played a key role in ancient ecosystems. I am working to better understand what is happening with the southern members of these groups (in North America), I am also seeking to better understand how they were living paleobiologically.

A third major area of research involves members of the Carnivora, both fossil and Recent members. This work focuses on the biomechanics of the group and the roles these predators play in the ecosystems they are a part of. Rather than looking into the biomechanics of the skull, as most researchers tend to do, I focus more on the postcranial biomechanics of these animals, in particular the felids. While it is assumed that most of these animals are fairly conservative postcranially, my work is finding that there is more variation than previously assumed, allowing them to behave at least slightly differently. Additionally I investigate the faunal dynamics of carnivorans in various ecosystems and faunas. Using modern analogues, I am able to understand how predators were living in the past, and using fossil analogues I am able to infer potential changes in the future for modern ecosystems and faunas.

**Publications**

**2016**

48) Moscato, David A. and **Steven E. Jasinski**. 2016. First record of fossil chelydrid and trionychid turtles (Testudines) from the Pleistocene of Sonora, Mexico. New Mexico Museum of Natural History and Science Bulletin 74:163-168.

47) **Jasinski, Steven E.** and Robert M. Sullivan. 2016. The validity of the Late Cretaceous pachycephalosaurid *Stegoceras novomexicanum* (Dinosauria: Pachycephalosauridae). New Mexico Museum of Natural History and Science Bulletin 74:107-115.

46) Sullivan, Robert M., Spencer G. Lucas, Asher J. Lichtig, Sebastian Dalman, and **Steven E. Jasinski**. 2016. A critique of Late Cretaceous dinosaur biogeography and endemism in the Western Interior Basin, North America. Journal of Vertebrate Paleontology 36(Supplement), Programs and Abstracts: 234A. (abstract)

45) **Jasinski, Steven E.**, Robert M. Sullivan, Eric Snively, Eric M. Morschhauser, Sebastian Dalman, and Peter Dodson. 2015. Theropods (Dinosauria: Theropoda) from the San Juan Basin, New Mexico, and implications for Late Cretaceous theropod faunas of Laramidia. Journal of Vertebrate Paleontology 36(Supplement), Programs and Abstracts: 161A. (abstract)

44) Lichtig, Asher J., Spencer G. Lucas, and **Steven E. Jasinski**. 2016. Geographic range extension & paleobiogeographic significance of the Late Cretaceous kinosernid turtle *Yelmochelys*. Geological Society of America Abstracts with Programs 48(7): paper no. 75-4. (abstract)

43) Lucas, Spencer G., Robert M. Sullivan, Asher J. Lichtig, Sebastian G. Dalman, and **Steven E. Jasinski**. 2016. Late Cretaceous dinosaur biogeography and endemism in the Western Interior Basin, North America: A critical re-evaluation. New Mexico Museum of Natural History and Science Bulletin 71:195-213.

42) **Jasinski, Steven E.** and Peter Dodson. 2016. Variation of the felid (Mammalia: Felidae) scapula and implications for felid biology. International Congress of Vertebrate Morphology 13: LOC1-4. (abstract)

**2015**

41) **Jasinski, Steven E.** and Steven C. Wallace. 2015. A borophagine canid (Carnivora: Canidae: Borophaginae) from the middle Miocene Chesapeake Group of eastern North America. Journal of Paleontology 89(6):1082-1088. doi:10.1017/jpa.2016.17

40) **Jasinski, Steven E.** and Peter Dodson. 2015. Biostratigraphy, paleobiogeography, and evolution of dromaeosaurids (Dinosauria: Dromaeosauridae) in North America. Geological Society of America Abstracts with Programs 47(7): paper no. 222-1. (abstract)

39) Szajna, Michael J., Brian W. Hartline, David L. Fillmore, Edward L. Simpson, and **Steven E. Jasinski**. 2015. A report on five new ichnofossil localities in the Late Triassic Newark Basin, Pennsylvania. Geological Society of America Abstracts with Programs 47(7): paper no. 165-11. (abstract)

38) **Jasinski, Steven E.**, Robert M. Sullivan, and Peter Dodson. 2015. Late Cretaceous dromaeosaurid theropod dinosaurs (Dinosauria: Dromaeosauridae) from southern Laramidia and implications for dinosaur faunal provinciality in North America. Journal of Vertebrate Paleontology 35(Supplement), Programs and Abstracts: 150A. (abstract)

37) Robinson, Robert F., **Steven E. Jasinski**, and Robert M. Sullivan. 2015. Theropod bite marks on dinosaur bones: indications of a scavenger, predator or both?; and their taphonomic implications. New Mexico Museum of Natural History and Science Bulletin 68:275-282.

36) **Jasinski, Steven E**. 2015. Middle Miocene Carnivora of New Mexico (Tesuque Formation): species patterns, richness, and faunal turnover. New Mexico Museum of Natural History and Science Bulletin 67:89-105.

35) **Jasinski, Steven E**. 2015. A new dromaeosaurid (Theropoda: Dromaeosauridae) from the Late Cretaceous of New Mexico. New Mexico Museum of Natural History and Science Bulletin 67:79-87.

**2014**

34) Moscato, David A. and **Steven E. Jasinski**. 2014. Late Miocene-Early Pliocene colubrid snakes (Serpentes: Colubridae) from Tennessee and their implications for North American snake evolution. Journal of Vertebrate Paleontology 34(Supplement), Programs and Abstracts: 192A. (abstract)

33) **Jasinski, Steven E.** and Leigha M. King. 2014. The Middle Miocene Carnivora of New Mexico (Tesuque Formation): species patterns, richness, and faunal turnover. Journal of Vertebrate Paleontology 34(Supplement), Programs and Abstracts: 154A. (abstract)

32) **Jasinski, Steven E**. and Steven C. Wallace. 2014. Investigation into the paleobiology of *Dasypus bellus* using geometric morphometrics and variation of the calcaneus. Journal of Mammalian Evolution 21(3):285-298. <http://link.springer.com/article/10.1007/s10914-013-9239-0>. doi:10.1007/s10914-013-9239-0.

31) **Jasinski, Steven E**. and David A. Moscato. 2014. An undercover hellbender: Unique artificial shelter use for an endangered and threatened amphibian, the Eastern Hellbender (*Cryptobranchus alleganiensis alleganiensis*). Collinsorum: The Journal of Kansas Herpetology 3(1):11-12. ([LINK to Collinsorum publications](http://www.cnah.org/khs/publications.aspx))

**2013**

30) **Jasinski, Steven E.** 2013. The utility of soft-tissue characters in understanding the phylogenetic relationships of fossil taxa: evidence from the evolution of the turtle family Emydidae. Journal of Vertebrate Paleontology 33(Supplement), Programs and Abstracts: 148A. (abstract)

29) **Jasinski, Steven E**. 2013. Review of the fossil Trionychidae (Testudines) from Alabama, including the oldest record of trionychid turtles from eastern North America. Bulletin of the Alabama Museum of Natural History 31(2):46-59.

**2012**

28) Sullivan, Robert M. and **Steven E. Jasinski**. 2012. Coprolites from the Upper Cretaceous Fruitland, Kirtland and Ojo Alamo formations, San Juan Basin, New Mexico. New Mexico Museum of Natural History and Science Bulletin 57:255-262.

27) Sullivan, Robert M., **Steven E. Jasinski**, and Spencer G. Lucas. 2012. Re-Assessment of Late Campanian (Kirtlandian) Turtles from the Upper Cretaceous Fruitland and Kirtland Formations, San Juan Basin, New Mexico, USA; pp. 337-387 in D. B. Brinkman, P. A. Holroyd, and J. D. Gardner (eds.), Morphology and Evolution of Turtles. Dordrecht: Springer. (book listed as published 2013)

26) Moscato, David A. and **Steven E. Jasinski**. 2012. First record of fossil Chelydridae and Trionychidae from the Pleistocene of Sonora, Mexico. Journal of Vertebrate Paleontology 32(Supplement), Programs and Abstracts: 146A. (abstract)

25) **Jasinski, Steven E.** Steven C. Wallace. 2012. An armadillo and a leg: inferring behavioral differences of *Dasypus bellus* and *Dasypus novemcinctus* from morphology of the calcaneus. Journal of Vertebrate Paleontology 32(Supplement), Programs and Abstracts: 117A. (abstract)

24) Moscato, David A. and **Steven E. Jasinski.** 2012. A diverse turtle fauna from the Late Pleistocene of Sonora, Mexico. Fifth Annual Meeting of the Southeastern Association of Vertebrate Paleontology Abstracts and Program: 13. (abstract-talk, which Steven gave)

23) **Jasinski, Steven E.** 2012. *Trachemys* (Testudines: Emydidae) from the Miocene-Pliocene Gray Fossil Site of eastern Tennessee and its potential implications for the evolution of the genus. Fifth Annual Meeting of the Southeastern Association of Vertebrate Paleontology Abstracts and Program: 13. (abstract-talk)

22) Koenig, Alan E., Spencer G. Lucas, Leonid A. Neymark, Andrew B. Heckert, Robert M. Sullivan, **Steven E. Jasinski**, and Denver W. Fowler. 2012. Direct U-Pb dating of Cretaceous and Paleocene dinosaur bones, San Juan Basin, New Mexico: COMMENT: Geology: e262. doi: 10.1130/G32154C.1.

**2011**

21) **Jasinski, Steven E.**, Spencer G. Lucas, and David A. Moscato. 2011. Investigation into the turtles from the Late Cretaceous to Paleocene in the San Juan Basin, New Mexico. Journal of Vertebrate Paleontology 31(Supplement): 131A. (abstract)

20) Sullivan, Robert M., Spencer G. Lucas, **Steven E. Jasinski**, and Darren H. Tanke. 2011. An unusual sacral neural spine osteopathy of a chasmosaurine (Dinosauria: Ceratopsidae) from the Upper Cretaceous Kirtland Formation (Hunter Wash Member), San Juan Basin, New Mexico. New Mexico Museum of Natural History and Science Bulletin 53: 484-488. ([link to volume](http://econtent.unm.edu/cdm4/document.php?CISOROOT=/bulletins&CISOPTR=1457&REC=14))

19) Sullivan, Robert M., Spencer G. Lucas, and **Steven E. Jasinski**. 2011. Preliminary observations on a skull of the amiid fish *Melvius*, from the Upper Kirtland Formation, San Juan Basin, New Mexico. New Mexico Museum of Natural History and Science Bulletin 53: 475-483. ([link to volume](http://econtent.unm.edu/cdm4/document.php?CISOROOT=/bulletins&CISOPTR=1457&REC=14))

18) Sullivan, Robert M., Spencer G. Lucas, and **Steven E. Jasinski**. 2011. The humerus of a hatchling lambeosaurine (Dinosauria, Hadrosauridae) referable to cf. *Parasaurolophus tubicen* from the Upper Cretaceous Kirtland Formation (De-na-zin Member), San Juan Basin, New Mexico. New Mexico Museum of Natural History and Science Bulletin 53: 472-474. ([link to volume](http://econtent.unm.edu/cdm4/document.php?CISOROOT=/bulletins&CISOPTR=1457&REC=14))

17) Sullivan, Robert M., **Steven E. Jasinski**, and Mark P. A. van Tomme. 2011. A new caenagnathid *Ojoraptorsaurus boerei*, new gen., new sp. (Dinosauria, Oviraptorosauria) from the Upper Cretaceous Ojo Alamo Formation (Naashoibito Member), San Juan Basin, New Mexico. New Mexico Museum of Natural History and Science Bulletin 53: 418-428. ([link to volume](http://econtent.unm.edu/cdm4/document.php?CISOROOT=/bulletins&CISOPTR=1457&REC=14))

16) Sullivan, Robert M., **Steven E. Jasinski**, Merrilee Guenther, and Spencer G. Lucas. 2011. The first lambeosaurin (Dinosauria, Hadrosauridae, Lambeosaurinae) from the Upper Cretaceous Ojo Alamo Formation (Naashoibito Member), San Juan Basin, New Mexico. New Mexico Museum of Natural History and Science Bulletin 53: 405-417. ([link to volume](http://econtent.unm.edu/cdm4/document.php?CISOROOT=/bulletins&CISOPTR=1457&REC=14))

15) Lucas, Spencer G., Robert M. Sullivan, **Steven E. Jasinski**, and Tracy L. Ford. 2011. Hadrosaur footprints from the Upper Cretaceous Fruitland Formation, San Juan Basin, New Mexico, and the ichnotaxonomy of large ornithopod footprints. New Mexico Museum of Natural History and Science Bulletin 53: 357-362. ([link to volume](http://econtent.unm.edu/cdm4/document.php?CISOROOT=/bulletins&CISOPTR=1457&REC=14))

14) **Jasinski, Steven E**., Robert M. Sullivan, and Spencer G. Lucas. 2011. Taxonomic composition of the Alamo Wash local fauna from the Upper Cretaceous Ojo Alamo Formation (Naashoibito Member), San Juan Basin, New Mexico. New Mexico Museum of Natural History and Science Bulletin 53: 216-271. ([link to volume](http://econtent.unm.edu/cdm4/document.php?CISOROOT=/bulletins&CISOPTR=1457&REC=14))

13**) Jasinski, Steven E**. and Robert M. Sullivan. 2011. Re-evaluation of pachycephalosaurids from the Fruitland-Kirtland transition (Kirtlandian, late Campanian), San Juan Basin, New Mexico, with a description of a new species of *Stegoceras* and a reassessment of *Texacephale langstoni*. New Mexico Museum of Natural History and Science Bulletin 53: 202-215. ([link to volume](http://econtent.unm.edu/cdm4/document.php?CISOROOT=/bulletins&CISOPTR=1457&REC=14))

12) **Jasinski, Steven E**. 2011. Biomechanical modeling of *Coelophysis bauri*: possible feeding methods and behavior of a Late Triassic theropod. New Mexico Museum of Natural History and Science Bulletin 53: 195-201. ([link to volume](http://econtent.unm.edu/cdm4/document.php?CISOROOT=/bulletins&CISOPTR=1457&REC=14))

11) **Jasinski, Steven E**. 2011. Problems with the classification of fossil emydids (Testudines: Emydidae) and the need for re-evaluation of *Trachemys*. Fourth Annual Meeting of the Southeastern Association of Vertebrate Paleontology Abstracts and Program: 15. (abstract-talk)

**2010**

10) Sullivan, Robert M., **Steven E. Jasinski**, and Spencer G. Lucas. 2010. Late Cretaceous (Kirtlandian) turtles from the Fruitland and Kirtland formations, San Juan Basin, New Mexico. Journal of Vertebrate Paleontology 30(Supplement): 172A. (abstract)

9) Lucas, Spencer G., Robert M. Sullivan, and **Steven E. Jasinski**. 2010. Giant hadrosaur footprints from the Upper Cretaceous Fruitland Formation, San Juan Basin, New Mexico. Journal of Vertebrate Paleontology 30(Supplement): 124A. (abstract)

8) **Jasinski, Steven E**. and Robert M. Sullivan. 2010. A new small pachycephalosaurid from the San Juan Basin, New Mexico and a re-evaluation of pachycephalosaurids from the Kirtlandian LVA (late Campanian). Journal of Vertebrate Paleontology 30(Supplement): 111A. (abstract)

7) Sullivan, Robert M., Dennis R. Braman, **Steven E. Jasinski**, and Spencer G. Lucas. 2010. New palynological data from Cretaceous strata in the San Juan Basin, New Mexico, do not indicate a Paleocene age for dinosaur fossils. New Mexico Geology, v. 32 (2): p. 67. (abstract)

**2009**

6) Spielmann, Justin A., Spencer G. Lucas, Robert M. Sullivan, **Steven E. Jasinski**, and Paul L. Sealey. 2009. Giant sea turtle from the Cretaceous (upper Campanian) Pierre Shale, Raton Basin, Northeastern New Mexico. Turtle Symposium Abstracts and Program. 171-175. (extended abstract)

5) Lucas, Spencer G., Robert M. Sullivan, Steven M. Cather, **Steven E. Jasinski**, Denver W. Fowler, Andrew B. Heckert, Justin A. Spielmann, and Adrian P. Hunt. 2009. No definitive evidence of Paleocene Dinosaurs in the San Juan Basin. Palaeontologia Electronica 12(2); 8A: 10p. ([PDF link](http://palaeo-electronica.org/2009_2/199/199.pdf))

4) Spielmann, Justin A., Spencer G. Lucas, Andrew B. Heckert, Robert M. Sullivan, and **Steven E. Jasinski**. 2009. Land-vertebrate faunachrons, GIS and cladotaxonomy: towards a global Triassic tetrapod biochronology. Geological Society of America Abstracts with Programs 41(7): 107. (abstract)

3) Sullivan, Robert M., **Steven E. Jasinski**, Spencer G. Lucas, and Justin A. Spielmann. 2009. The first “Lambeosaurin” (Dinosauria, Hadrosauridae, Lambeosaurinae) from the Upper Cretaceous Ojo Alamo Formation (Naashoibito Member), San Juan Basin, New Mexico: further implications for the age of the Alamo Wash local fauna. Journal of Vertebrate Paleontology 29(Supplement): 188A. (abstract)

2) Lucas, Spencer G., Andrew B. Heckert, Larry Rinehart, Justin A. Spielmann, and **Steven E. Jasinski**. 2009. Vertebrate fauna, stratigraphy, and age of the Whitaker Quarry (Ghost Ranch, New Mexico), the richest Upper Triassic dinosaur quarry in the world. Journal of Vertebrate Paleontology 29(Supplement): 137A. (abstract)

1) **Jasinski, Steven E.**, Robert M. Sullivan, Spencer G. Lucas, and Justin A. Spielmann. 2009. Taxonomic composition of the Alamo Wash local fauna from the Upper Cretaceous Ojo Alamo Formation (Naashoibito Member), San Juan Basin, New Mexico. Journal of Vertebrate Paleontology 29(Supplement): 122A. (abstract)

**In Prep**

Moscato, David A. and **Steven. E. Jasinski**. *In review.* First record of fossil Chelydridae and Trionychidae from the Pleistocene of Sonora, Mexico.

**Jasinski, Steven E**. and David A. Moscato. *In review*. Late Hemphillian colubrid snakes (Serpentes: Colubridae) from the Gray Fossil Site in eastern Tennessee: Implications for a crucial time in snake evolution in North America.

**Jasinski, Steven E**. *In prep*. A new slider turtle (Testudines: Emydidae: Deirochelyinae: *Trachemys*) from the Late Hemphillian (Late Miocene/Early Pliocene) of eastern Tennessee and the evolution of the deirochelyines.

**Jasinski, Steven E.** and Andrew B. Heckert. *In prep*. A trionychid from the Late Cretaceous Hell Creek Formation and its implications for the evolution of *Hutchemys* (Testudines: Trionychidae).

**Jasinski, Steven E.** *In prep*. The Late Cretaceous – Paleocene turtle of New Mexico: Survivorship across the K-Pg Boundary in the San Juan Basin.

**Jasinski, Steven E.**, Blaine W. Schubert, and Jason Bourque. *In prep*. A new chelydrid from the Hemphillian of the eastern United States and the evolution of the common snapping turtle.

Moscato, David A., **Steven E. Jasinski**, and Jim I. Mead. *In prep*. A fossil turtle assemblage from the Pleistocene of northwestern Mexico.

**Jasinski, Steven E**., Robert M. Sullivan, Peter Dodson, and others. *In prep*. A new dromaeosaurid (Theropoda, Dromaeosauridae) from the Upper Cretaceous Ojo Alamo Formation (Naashoibito Member, San Juan Basin, New Mexico.

**Jasinski, Steven E.**, Robert M. Sullivan, Eric M. Morschhauser, Peter Dodson. *In prep*. A juvenile chasmosaurine (Ornithischia: Ceratopsidae) from the Upper Cretaceous Kirtland Formation (De-na-zin Member), San Juan Basin, New Mexico.

**Theses:**

**Jasinski, Steven E**. 2013. Fossil *Trachemys* (Testudines: Emydidae) from the Late Hemphillian of Eastern Tennessee and its implications for the evolution of the Emydidae. M.S. Thesis. East Tennessee State University. 510 pp.

**Jasinski, Steven E**. 2008. Biomechanical Modeling of *Coelophysis bauri* to help analyze possible feeding methods and behavioral characteristics of this Late Triassic theropod. B.S. Thesis. Pennsylvania State University. 76 pp.

**Reviewed Publications In:**

Bulletin of the Peabody Museum of Natural History

New Mexico Museum of Natural History and Science Bulletin

**Grants and Funding**

**University of Pennsylvania**

Greg and Susan Walker Endowment (2014, $2500; 2015, $3500; 2016, $4500)

University of Pennsylvania Paleontology Research Grant (2015, $3000; 2016, $3650)

SASGov Travel Grant (2014; $500)

SAS Travel Subvention (2014; $400)

**State Museum of Pennsylvania**

Research Grants (2013, $2000 and $1500; 2014, $1500; 2015; $4000)

**East Tennessee State University**

Student Research and Travel Grant, Department of Biological Sciences (2010; $300 and 2011; $400)

Student Research Grant, Don Sundquist Center of Excellence in Paleontology (2010, 2011; $200 each, 2012; $300)

Student Research and Travel Grant, Department of Geosciences (2011; $200)

Student Travel Grant, Graduate and Professional Student Association (2011; $400)

**Professional Experience**

**2014-present:** *Graduate Assistant*, Department of Earth and Environmental Science, University of Pennsylvania, Philadelphia, PA

**2012-present**: *Acting Curator*, Section of Paleontology and Geology, State Museum of Pennsylvania, Harrisburg, PA

**2011-2013**: *Research Associate*, East Tennessee State University Natural History Museum at the Gray Fossil Site; duties included field investigation, screen washing, specimen preparation, tour guide, program assistant

**2010-2013**: *Research Assistant*, Geosciences Department, East Tennessee State University; duties included cataloging, preparation, and identification of various fossils and modern comparative specimens.

**2010-2012**: *Teaching Assistant*, Geosciences Department, East Tennessee State University

**2008-2012**: *Paleontological Research and Field Assistant*, section of Paleontology and Geology, State Museum of Pennsylvania with Dr. Robert Sullivan

**2007-2008**: *Research Assistant*, the Graham Paleontology Lab Group, Earth and Mineral Sciences Museum, Pennsylvania State University; duties included cataloging, preparation, and identification of various fossil specimens

**Student Experience**

**2014-Present:** Full-time Doctoral student, Earth and Environmental Science department, University of Pennsylvania

**2010-2013**: Full-time Master’s student, Biological Sciences/Geosciences departments, East Tennessee State University

**2009**: Graduate course work in Geosciences Department at the Pennsylvania State University

**2003-2008**: Full-Time student at the Pennsylvania State University

**Teaching/Outreach Experience**:

**2014-present:** Teaching Assistant, Earth and Environmental Science Department, University of Pennsylvania

Introduction to Environmental Earth Science (ENVS 200: Environmental Earth Science

Recitation)

**2009-present**: Participated in several events with the State Museum of Pennsylvania helping to present paleontology and fossils to the public

**2011-2012**: Tour Guide and program assistant, East Tennessee State University Natural History Museum at the Gray Fossil Site, serving to provide information and assist in various interactive activities

**2010-2012**: Teaching Assistant, Department of Geosciences, East Tennessee State University  
 Historical Geology Lab (GEOL 1051: Life Through Time Lab)  
 Physical Geology Lab (GEOL 1041: Exploring Geology Lab)

**2010-2012**: Helped design and modify several original laboratory exercises for introductory geology courses (GEOL 1041: Physical Geology and GEOL 1051: Historical Geology)

**2007-2008**: Participated in numerous public outreach events with the Pennsylvania State University Earth and Mineral Sciences Museum, presenting geological and paleontological science to local children and families

**Courses Taught or Instructed**

**Introduction to Environmental Earth Science** (University of Pennsylvania): A course meant to expose students to the principles that underlie understanding of how the Earth works. The goal of the course is for students to obtain a scientific understanding of the entire Earth system by describing its component parts (lithosphere, hydrosphere, atmosphere, biosphere) and their interactions, and describe how they have evolved, how they function, and how they may be expected to respond to human activity. The challenge to Earth Systems Science is to develop the capability to predict those changes that will occur in the next decade to century, both naturally and in response to human activity. Energy, both natural and human-generated, will be used as a unifying principle. Knowledge gained through this course is meant to students make informed decisions in all spheres of human activity, including science, policy, and economics, among others.

**Physical Geology/Exploring Geology** (East Tennessee State University): An introductory level geology course focusing on teaching students the basics, including but not limited to: identification and properties of various minerals and rocks, and understanding key concepts in geology such as geologic time, earthquakes, volcanoes and tectonic activities, field geology, and various maps and mapping techniques.

**Life Through Time** (East Tennessee State University): A course teaching students the fundamentals of biology within the geologic record. This commonly focused on geologic time, fossils, sedimentary structures and similar things, along with biostratigraphy and how the record of biological events and organisms affects our understanding of geology and the history of the earth.

**Laboratory Experience**

**2008-present**: Specimen preservation and preparation, organization, identification, specimen molding, and specimen casting within the laboratory in the Section of Paleontology and Geology at the State Museum of Pennsylvania

**2011-2015**: Specimen preparation and organization in East Tennessee State University Vertebrate Paleontology Lab, Department of Geosciences

**2011-2013**: Fossil preparatory work in the East Tennessee State University Natural History Museum, Gray Fossil Site, Tennessee

**2007-2008**: Research assistant for Dr. Russell Graham at the Pennsylvania State University Earth and Mineral Sciences Museum; duties included sorting, organizing and labeling fossil specimens

**2007-2008**: Fossil preparatory work at the Pennsylvania State University Earth and Mineral Sciences Museum

**Laboratory Skills**

Specimen preparation, including stabilization, consolidation, and preservation utilizing; acetone; butvar; B72; various glues and other adhesives; ice picks; chisels; various hammers; brushes; hot plate; molding and casting supplies (including use of various epoxies and dyes); airscribes (including micro jacks of various sizes); dental tools (including picks and scalpels); and air abrasion (or micro-abrasion); microscopic photography (using a Leica EZ4 D, Leica EZ4 HD, Leica Z16 APO macroscope, QImaging MicroPublisher 5.0 RTV image capture, and Zeiss KL200 light source)

**Museum Skills**

Various curatorial and collections duties, including management of collections; cataloging specimens, including utilization of electronic collection databases in Microsoft Access, and modification of the current database through that program; cleaning and storage of specimens; recording of data; identifying, correcting, and editing of specimen data, namely inconsistencies or errors; assisted in field and lab work; conducted travel for research, both with fellow researchers and alone; conducted curatorial duties when head curator was not present, and took over curatorial duties after the former curator retired

**Paleontological/Geological Field Experience**

**2014-present:** Conducted field work on the stratigraphy and vertebrate paleontology from Late Cretaceous and Paleocene rocks in New Mexico as the PI (State Museum of Pennsylvania; University of Pennsylvania)

**2006-present**: Conducted on various geology, stratigraphy and fossils in Pennsylvania, both while alone and with several other professional paleontologists and geologists

**2010-2015**: Conducted on fossil vertebrates in Tennessee in Mio-Pliocene sediments with Dr. Steven Wallace

**2008-2010, 2013-2014**: Volunteered for field work, in stratigraphy and vertebrate paleontology from Late Cretaceous and Paleocene rocks in New Mexico with Dr. Robert Sullivan (State Museum of Pennsylvania)

**2015:** Conducted on the fossil vertebrates and stratigraphy in Early Cretaceous portion of the Gongpoquan Basin in the northern part of Gansu Province in northwestern China with Drs. Peter Dodson and Daqing Li.

**2009**: Conducted on the geology and stratigraphy of various parts of Virginia and West Virginia with Dr. Lee Kump and Dr. Michael Arthur (Pennsylvania State University)

**2008**: Conducted on fossil vertebrates from Late Jurassic rocks in Colorado with Dr. Kenneth Carpenter and Virginia Tidwell (Denver Museum of Nature and Science)

**2007-2008**: Conducted field work on geologic mapping and stratigraphy in various parts of Montana, Wyoming, and Utah with Dr. Rudy Slingerland, Dr. David Bice, Dr. Eric Kirby (Pennsylvania State University)

**Zoological/Biological Field Experience**

**2008-present**: Studied modern turtles of south-central Pennsylvania, focusing on the biology of *Glyptemys muhlenbergii*

**2012-2015**: On turtles in Tennessee, focusing on the biology and genetics of *Trachemys scripta troostii*

**2011-2015**: On the herpetology of South Carolina and Tennessee, focusing on field techniques and field identifications

**2012-2014**: On raptors (owls, hawks, kestrels, vultures) in Tennessee, focusing on care and conservation

**Field Skills**

Paleontological/Geological field skills include; planning, design, and modification of field work and field methods; field preparation, use of field gear such as various hammers, brushes, chisels, trowels, marsh picks, small picks and ice picks; field use of acetone and butvar; field consolidation, stabilization, and preservation; making plaster field jackets; microfossil collection; mapping of field specimens; field illustration; use of GPS to record locality data; and recording of field data

Zoological/Biological field skills include; working with raptors (owls, hawks, vultures, kestrels), including their handling, care, and public outreach; working with reptiles (turtles, snakes), including their handling, care, and public outreach

**Memberships and Organizations:**

The Society of Vertebrate Paleontology: 2007-present

The Paleontological Society: 2007-present

Society for the Study of Amphibians and Reptiles: 2012-present

Society for the Study of Mammalian Evolution: 2012-present

Society for Integrative and Comparative Biology: 2013-present

Geological Society of America: 2007-present

GSA: Geobiology and Geomicrobiology Division: 2007-present

The Nature Conservancy: 2009-present

World Wildlife Fund: 2009-present

Graduate and Professional Student Association (East Tennessee State University): 2010-2014

The American Quaternary Association: 2007-2009

Society for Sedimentary Geology: 2007-2009

American Association of Petroleum Geologists: 2007-2009

Penn State Geosciences Club: 2007-2009

Graham Paleontology Lab Group: 2007-2008

**Honors and Awards:**

Geo. L. Harrison Fellow, University of Pennsylvania: 2014-2015

Benjamin Franklin Fellowship, University of Pennsylvania: 2014-2017

Don Sundquist Center of Excellence in Paleontology: 2010-present

Golden Key International Honour Society: 2012-present

**Collaborators and Other Affiliations**

David M. Bice (Pennsylvania State University), J. Kenneth Carpenter (Denver Museum of Nature and Science; Utah State University Eastern Prehistoric Museum), Steven M. Cather (New Mexico Institute of Mining and Technology), Alex Downs (Ghost Ranch, New Mexico), Denver W. Fowler (Museum of the Rockies), Steven Green (Cleveland Museum of Natural History), Russell W. Graham (Pennsylvania State University), Andrew B. Heckert (Appalachian State University), Amy Henrici (Carnegie Museum of Natural History), Gary L. Jackson (Cleveland Museum of Natural History), Leigha M. King/Leigha M. Lynch (Oklahoma State University), Alan E. Koenig (United States Geologic Survey, Denver, CO), Spencer G. Lucas (New Mexico Museum of Natural History and Science), Jim I. Mead (East Tennessee State University), David A. Moscato (East Tennessee State University), Leonid A. Neymark (USGS, Denver, CO), Larry Rinehart (New Mexico Museum of Natural History and Science), Blaine W. Schubert (East Tennessee State University), Paul L. Sealey (New Mexico Museum of Natural History and Science), William F. Simpson (Field Museum in Chicago), Nathan Smith (University of Chicago), Justin A. Spielmann (New Mexico Museum of Natural History and Science), Robert M. Sullivan (State Museum of Pennsylvania), Virginia Tidwell (Denver Museum of Nature and Science), Mark P. A. van Tomme, Steven C. Wallace (East Tennessee State University), Peter Wilf (Pennsylvania State University)

**Relevant College Coursework**

**Pennsylvania State University:** Physical Geology; Teaching Internship; Geology of Climate Change; Earth Materials; Physical Processes in Geology (Geophysics); Hydrogeology; Structural Geology; Earth History; Field Geology; Vertebrate Paleontology; Independent Studies; Geobiology; Senior Thesis; Paleobiology Seminar (Graduate course); Evolution of the Biosphere (Graduate course); Basic Concepts and Biodiversity; Biology of Populations and Communities; Biology of Molecules and Cells; Physiological Ecology; Wildlife and Fisheries Conservation; The Vertebrates; Ornithology; Mammalogy; Dinosaur Extinctions and Other Controversies**;** Chemical Principles 1; Chemical Principles 2; Experimental Chemistry 1; Experimental Chemistry 2; Organic Chemistry**;** Calculus with Analytic Geometry I; Calculus with Analytic Geometry II; Ordinary and Partial Differential Equations**;** Mechanics; Electricity and Magnetism; Materials in Today’s World**;** Rhetoric and Composition (English); Effective Writing: Technical Writing (English); Effective Speech (Communication Arts and Sciences)

**East Tennessee State University** (all graduate courses)**:** Higher Vertebrate Paleontology; Statistical Methods in Paleontology; Research Methods; Molecular Evolution and Ecology; The Carnivora; Independent Study (centered on statistical study of *Dasypus*); Paleoherpetology; Geochronology; Independent Study (centered on Turtle systematics); Taphonomy; Island Biogeography (sat in on); Independent Study (Colubridae morphology); Independent Study (Pleistocene turtles of Mexico)

**University of Pennsylvania**: Gross Anatomy; Rates and Dates (geochronology); Independent Study (Dromaeosauridae Evolution); Evolution of Land Ecosystems; Evolutionary History of the Mammalia (advanced vertebrate paleontology seminar); Advanced Paleontology; Topics in Earth Science; Independent Study (Biomechanics and Finite Element Modeling); Independent Study (Agility in Vertebrates)

**Additional Skills**  
  
Computer Skills:

Basic knowledge of C++  
   
 Significant experience using the following programs:  
 Microsoft Office  
 Particularly Word, Excel, PowerPoint and Access  
 Adobe Photoshop  
 Adobe Illustrator  
 ArcGIS  
 SPSS Statistics Program  
 Stonybrook Geometric Morphometrics Software

ImageJ

MorphoJ

References provided upon request.